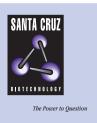
## SANTA CRUZ BIOTECHNOLOGY, INC.

# Rev7 (yC-18): sc-11864



## BACKGROUND

Cells subjected to irradiation with ultraviolet light (UV) suffer DNA damage in the form of covalent linkage between adjacent pyrimidines. DNA repair can occur in either an error-free mechanism, which has the ability to correctly replicate past the lesion, or via an error-prone mechanism, which replicates DNA despite an unrepaired lesion. The error-prone mechanism is referred to as translesion synthesis (TLS) and it has the ability to incorporate new mutations into the genome, which is a potential origin of cancer. Rad30 (also designated DNA polymerase h (Pol h) or xeroderma pigmentosum variant (XPV)) is able to replicate in an error-free manner past a cis-syn-thyminethymine dimer in S. cerevisiae. The Rev1, Rev3, and Rev7 proteins are the subunits of DNA polymerase z (Pol-z), which is involved in translesion synthesis. In *S. cerevisiae*, Rnr1 is a ribonucleotide reductase that catalyzes the rate-limiting step in the production of deoxyribonucleotides essential for DNA synthesis and repair.

## REFERENCES

- Elledge, S.J. and Davis, R.W. 1990. Two genes differentially regulated in the cell cycle and by DNA-damaging agents encode alternative regulatory subunits of ribonucleotide reductase. Genes Dev. 4: 740-751.
- Baynton, K., Bresson-Roy, A., and Fuchs, R.P. 1999. Distinct roles for Rev1p and Rev7p during translesion synthesis in *Saccharomyces cerevisiae*. Mol. Microbiol. 34: 124-133.
- McGregor, W.G. 1999. DNA repair, DNA replication, and UV mutagenesis. J. Investig. Dermatol. Symp. Proc. 4: 1-5.
- Baynton, K. and Fuchs, R.P. 2000. Lesions in DNA: hurdles for polymerases. Trends Biochem. Sci. 25: 74-79.
- Yuan, F., Zhang, Y., Rajpal, D.K., Wu, X., Guo, D., Wang, M., Taylor, J.S., and Wang, Z. 2000. Specificity of DNA lesion bypass by the yeast DNA polymerase eta. J. Biol. Chem. 275: 8233-8239.

#### SOURCE

Rev7 (yC-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Rev7 of *Saccharomyces cerevisiae* origin.

## PRODUCT

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-11864 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **STORAGE**

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

#### **APPLICATIONS**

Rev7 (yC-18) is recommended for detection of Rev7 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

## **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey antigoat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2033 and Western Blotting Luminol Reagent: sc-2048.

### **RESEARCH USE**

For research use only, not for use in diagnostic procedures.